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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCESMonthly Activities Report
of the Air Quality Bureau

September, 1977

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STATE DOCUMENTS

1. Highlights

New open burning regulations and information pamphlets were sent to concerned parties.

Work is continuing on the Health Study portion of MAPS.

2. Ambient Air Quality Network

a. Standards Exceeded:

SO₂ from company stations near Anaconda Smelter

State 1-hour	47
State 24-hour	6
Federal 24-hour	2
Federal 3-hour	2

SO ₂	Mill Creek	Hy. Jct.	C-Hill	Post Office
Highest 1-hour reading	---	0.80	2.39	0.46
No. of Excr. over 0.25 ppm	---	21	18	4
Highest 24-hr average	---	0.10	0.13	0.04

CO Alpine West - ppm

High 24-hour average	0.81
High 1-hr average	8.5

b. Air Stagnation Advisories:

None for September. The smoke dispersion forecasts were initiated on September 12. There will be two forecasts a day this year, one at 9:00 a.m. and one at 1:30 p.m.

c. Laboratory Status:

Total Samples for Month: 260
Total Determinations for Month: 862

d. Developments:

EPA contract for sulfate and nitrate is now completed. An audit was completed for sulfate and nitrate.

Four days were spent in Denver attending a Quality Assurance course.

3. Permits and Tax Credits

a. Construction Permits - Applied for:

Kaiser Cement, Montana City, coal-handling equipment
Meyer Construction, Wibaux County, asphalt plant
Meyer Construction, Carbon County, asphalt plant
Hilde Construction, Deer Lodge County, gravel crusher and asphalt plant
Hilde Construction, Deer Lodge County, gravel crusher and asphalt plant
Hilde Construction, Powell County, gravel crusher and asphalt plant
American Colloid Company, Malta, facilities for milling ore
McIntyre Construction, Jefferson County, asphalt plant
J & D Lumber, Polson, boilers
Westco Refinery, Cut Bank, Steam generator
Francis Muggli, Inc., Valley County, gravel crusher
Louisiana Pacific, Trout Creek, fuel cell and boiler
Petrolane/Perry Gas Processing, Sidney, gas compressor, regeneration unit \$15,000
Wickens Brothers, Hill County, gravel crusher
Wickens Brothers, Hill County, gravel crusher
Wickens Brothers, Hill County, asphalt plant

Approved:

Pack Concrete, Inc., Flathead County, asphalt plant
Montana-Dakota Utilities, Glendive, gas turbine power plant
Meyer Construction Company, Beaverhead County, asphalt plant
Peter Kiewit Sons, Lincoln County, asphalt plant
Baltrusch Construction, Powell County, asphalt plant
Gus Albert, Roosevelt County, gravel crusher
Gus Albert, Roosevelt County, asphalt plant
Gus Albert, Roosevelt County, gravel crusher
Wickens Brothers, Treasure County, gravel crusher
Meyer Construction, Wibaux County, gravel crusher
Meyer Construction, Richland County, gravel crusher
Portable Pavers, Inc., Dawson County, asphalt plant
Texaco, Inc., Hill County, natural gas treating facility
Francis Tindall Construction, Fergus County, gravel crusher
Super Save Market, Helena, incinerator
Pack and Company, Flathead County, asphalt plant
Meyer Construction, Wibaux County, asphalt plant
Meyer Construction, Carbon County, asphalt plant
Hilde Construction, Deer Lodge County, gravel crusher and asphalt plant
McIntyre Construction, Jefferson County, asphalt plant
Westco Refining, Cut Bank, steam generator
Francis Muggli, Valley County, gravel crusher

b. Operating Permits: None

c. Tax Credits: None

4. Variance Status

a. Current:

SO₂ variance for Anaconda Company renewed at January Board meeting. It expired on June 30 and a request for renewal has been scheduled for the November Board meeting.

Anaconda's application for variance from visibility rule for smelter has been scheduled for November Board meeting.

ASARCO, Inc. received a variance at September Board meeting for smelter operation. ASARCO agreed to fund a study for \$25,000 on acid plant effects as a condition for granting the variance.

Anaconda Aluminum, Columbia Falls, F- and particulate, expires June 30, 1978.

b. New: None

5. Enforcement Actions

a. Citation:

Cenex, Billings, failure to test tail gas incinerator
Hoerner-Waldorf, Missoula, TRS-#3 Recovery, 7/27/77, S1400
Evans Products, Missoula, Veneer Dryer #4, 9/8/77, S1460
Evans Products, Missoula, Veneer dryer #4, 9/19/77, S1460
ASARCO, Inc., East Helena, MT-770902-HK-1 and 770902-HK-2, smelter in violation of Federal 24-hr. sulfur dioxide ambient standards.
Empire Sand and Gravel, Billings, 770907-BR-1, asphalt plant in violation of rule 16-2.14(1)-S1460 (visible air contaminants, restrictions)
Louisiana Pacific, Deer Lodge, 770909-DH-1, tepee burner in violation of rule 16-2.14(1)-S14030 (Wood Waste Burners)
McIntyre Construction Company, Great Falls, 770906-HK-1, asphalt plant in violation of rule 16-2.14(1)-S1400 (Permits, Construction and Operation of Equipment)

b. Notice of Violation:

Zook Brothers Construction Co., asphalt plant, east of Anaconda, Visible Air Contaminants, Restrictions

c. Order for Corrective Action:

Zook Brothers Construction Co., asphalt plant, east of Anaconda, November 1, 1977.

d. Court Actions: None

6. Tepee Burner and Open Burning

Tepee Burner Inventory:	No. at start	39
	New starts	0
	Shutdowns	0
	No. at end	39

6. Open Burning, cont.

Burning Permits for September

Flathead County	118	Missoula County	15
Lake County	30	Yellowstone County	15
Sanders County	84	Rest of State	361
Cascade County	9	Total	632

Pamphlet on open burning was distributed to persons issuing air quality permits.

7. Source Tests Performed

- a. Agency Source Tests: None
- b. Non-Agency Source Tests:

Hoerner-Waldorf, Missoula, 26 particulate tests on recovery boilers, lime kilns, smelt tanks, slakers and hogged-ruel boilers

Meyer Construction, Hardin, opacity test at asphalt plant. Their plant in Belfry was instructed to retest.

8. Field Investigations

Peter Kiewit and Sons, batch plant, scrubber problems, plant shut down.
Zook Brothers Construction, East of Anaconda, asphalt plant, documentation
McIntyre Construction, Elk Park, asphalt plant, documentation
McIntyre Construction, Elk Park, asphalt plant, citation issued, no permit
Castle Mountain Lumber, White Sulphur Springs, tepee burner, documentation
Willow Creek Lumber, Livingston, tepee burner, complaint follow-up
Burkland Studs, Livingston, tepee burner, documentation
Empire Sand & Gravel, West of Livingston, asphalt plant, citation issued
Wickes Forest Industries, Townsend, tepee burner
Kiewit Sons, asphalt plant, investigation continuing
Brand S Lumber, Livingston, tepee burner, investigation
Empire Sand & Gravel, west of Livingston, asphalt plant, re-investigation
Helena Sand & Gravel, Helena, asphalt plant, investigation
Maronick Construction, Montana City, crusher, complaint follow-up
Diamond Asphalt, Chinook, oil reclamation site, request to open burn
S & W Sawmill, Darby
Del Conner Lumber, Darby
Louisiana Pacific, Deer Lodge
Hardin-Meyer Construction Company, asphalt plant
Cenex, Billings, sulfur plant
Conoco, Billings, FCC unit

9. Complaints

Willow Creek Lumber, Livingston, tepee burner, fugitive particulate, investigation
Kiewit Sons, Helena, asphalt plant, visible air contaminants, restrictions, investigation
Maronick Construction, Montana City, crusher, fugitive emissions, investigation.

10. Data Processing Services

- a. Ambient Data Summary: See attached
- b. Emission Inventory Status:

Slash burning information is beginning to arrive.
Updates received and processed. Semiannual report sent to EPA.
- c. Prevention of Significant Deterioration: None
- d. Modeling: None

11. Environmental Impact Statements

- a. Agency Impact Determinations: Colstrip 3 & 4 addendum is ongoing-target date of October, 1977
- b. Other Agency EIS's reviewed: None

12. Status of Studies, Contracts and Reports

Columbia Falls Study - Acoustic radar repaired in Kalispell
Poplar River Study - final budget for FY 78 prepared and sent to EPA.
Analysis of background data and references was made for first-year report.
Annual Air Quality Summary for 1976 was printed and distributed.
ASARCO, Troy - sampling stations operational, three bi-monthly progress reports sent.

Billings CO/TSP, Missoula TSP - Reviewed with EPA
S.E. Coal TSP - draft document of control measures was finished.
MAPS, Emission Inventory is prioritized and being organized for contract bid.
MAPS - Air Monitoring Committee reviewing site selection in Billings.
Rockwell International has responded to contract proposal to evaluate
Anaconda's in-stack instruments. Contract will be finalized in October.

13. Schools and Training

EPA school in Denver on Quality Assurance in Air Pollution Systems was attended.
EPA school in Seattle on Statistical Analysis of Air Pollution Data was attended.

14. Public Hearings and Meetings

- a. Public Hearings Held:

Missoula, TSP, in Missoula - committee reports and proposed rule change comments
- b. Meetings Attended:

Fish and Game, re: Highway Impact Evaluation Group, Helena
Department of State Lands, Helena
EPA, Helena
Public Information Program, Helena
Montana Association of Land Use Planners, Great Falls

14. Public Meetings Attended: Cont.

Advisory Council, Helena, rule revisions
Billings industries, Helena, rule revisions
EPA, AQDHS-II system and EPA annual air quality report
Billings Industries, Billings, AQMA SO₂ monitoring meeting
Air shed meeting, Helena
MAPS, GCA, Helena
Lt. Governor, Helena, Cenex problems
Lt. Governor, Helena, Cenex request for declaratory ruling on sulfur plant testing
Petrolane, Helena, permit application for gas sweetening plant

c. Intra-Staff Meetings:

Legal Division, Billings industries
Staff, ASARCO Troy project,
Staff, engineering section budget
Staff, S.E.Coal

15. Public Information Requests

Clean Air Act	2
Rules and Regs	9
General Information	3

16. N.A.

17. Other

Francis Mahon Deaconess Hospital in Glasgow has been requested twice to submit construction permit application for incinerator. No response received.

First draft of Air Quality Bureau statement of policy and organization of quality assurance program written.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

August 1977

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Pollutant: TSP

Units: $\mu\text{g}/\text{cu meter}$

AREA	HIGH READING			ARITHMETIC AVER.		Comments
	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Data	
AQCR Site Location						
140 Morton Res. Big Horn Co.	73	148	162	48.1	8	
Warren Ranch Big Horn Co.	108	108	26.9	8		
Lockwood School Billings	74	137	137	52.4	8	
Billings	57	163	163	41.1	8	
City Hall	81	165	165	62.2	8	
Billings	55	155	155	55.5	8	
Grand Ave. Sch.	52	150	150	41.5	8	
Laurel Jr. High	52	150	150	41.5	8	
141 Metal Roof Great Falls	71	225	225	45.7	8	
Fire Sta. #1 Great Falls	72	869	869	71.9	8	
10th Ave. S. Great Falls	143	161	161	87.3	3	
Hwy Jct.	79	121	250	45.0	8	
McKinley Res. Granite Co.	217	217	217	54.0	8	
Gravel School Butte	100	226	226	86.7	7	
Gilman Constr. Butte	297	297	297	84.8	4	
Atkins Res. Yellowtail	58	130	130	46.0	8	
Rocky Mtn. Co.	32	46	46	23.7	8	
Tetons, Wyo.	55	41	64	36.1	8	

Pollutant: TSP

Units: $\mu\text{g}/\text{cu meter}$

AREA	HIGH READING			ARITHMETIC AVER.		Comments
	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Data	
AQCR Site Location						
142 Microwave Jefferson Co.	52	103	103	27.4	8	
112 E. Pacific Missoula & Clk Co.	75	149	187	67.7	8	
Kohler Res. Three Forks	309	309	300	157.6	1	
143 Elk Lake Carter Co.	101	535	535	79.0	6	
Littlefield Hill Miles City	30	45	50	18.1	8	
Gladstone	10	102	102	26.2	8	
Lakeview	13	243	243	29.3	6	
Rosebud Pk.	45	91	91	32.1	8	
McCone Co.	45	91	91	32.1	8	
Broadus	28	275	272	8		
Powder Riv. Co.	53	93	93	35.8	8	
McClintip Border Site	36	107	107	37.1	7	
144 Mt. Rose TSP: Scooby	242	260	294	111.4	8	
Courthouse	137	295	342	92.2	8	
Mt. Pisgah Co.	148	148	214	52.3	8	
Franchtown	88	255	346	47.4	8	
145 Missoula Co.	98	226	226	87.7	8	
MTX-Brown Montana Co.	171	171	171	55.5	6	
146 Missoula Co. #2	70	255	255	44.6	5	

Pollutant: Misc. Cont. Data

Units

AREA	HIGH READING			ARITHMETIC AVER.		Comments
	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Data	
AQCR Site Location						
140 Carbon Monoxide 27th & Montana	8.40	16.00	27.50	2.538	8	
Billings	7.30	7.30	7.30	1.840	2	
141 10th Ave. So. Great Falls	2.50	3.70	3.70	0.472	3	
144 "Unfunction Jct. Missouri	-----	-----	-----	-----	-----	
Hydrocarbons	-----	-----	-----	-----	-----	
140 27th & Montana Billings	5.70	6.90	10.20	2.300	8	
Nitric Oxide	-----	-----	-----	-----	-----	
143 NO Site Colstrip	0.04	0.10	0.10	0.027	3	
Volatile Oxide Hydrocarbons	-----	-----	-----	-----	-----	
140 27th & Montana Billings	0.18	0.18	0.18	0.020	7	
142 Alpine West Butte	0.06	0.08	0.08	0.012	3	
143 NO Site Colstrip	0.07	0.13	0.13	0.020	6	
Oxides of Nitrogen	-----	-----	-----	-----	-----	
143 NO Site Colstrip	0.05	0.12	0.12	0.037	3	

Pollutant: Misc. Cont. Data

Units:

AREA	HIGH READING			ARITHMETIC AVER.		Comments
	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Data	
AQCR Site Location						
140 Zone	0.06	0.08	0.08	0.020	8	
27th & Montana Billings	0.15	0.15	0.15	0.061	2	
142 Alpine West Billings	0.36	0.63	0.74	0.051	8	
143 Butte	0.19	0.44	0.44	0.011	8	
144 "Unfunction Jct. Missouri	1.00	1.40	1.40	0.010	8	
Alpine West	-----	-----	-----	-----	-----	
142 Middle Mountain Billings	0.05	0.20	0.20	0.002	8	
143 E. Helena	0.32	0.88	1.16	0.017	8	
144 E. Helena	0.68	1.05	1.05	0.011	8	
145 Middle Mountain Billings	0.0	0.1	0.1	0.001	8	
146 "Norwell Rdg. Helena	-----	-----	-----	-----	-----	
147 C-Hill	-----	-----	-----	-----	-----	
148 Anaconda	3.20	3.51	3.51	0.022	8	
149 Hwy Jct.	-----	-----	-----	-----	-----	
148 Anaconda	0.05	1.46	1.58	0.025	8	
149 Hwy Creek	-----	-----	-----	-----	-----	
148 Anaconda	0.32	0.88	1.16	0.017	8	
149 Post Office	-----	-----	-----	-----	-----	
148 Anaconda	0.68	1.05	1.05	0.011	8	
149 Hwy Site Colstrip	0.0	0.1	0.1	0.001	8	

* Site no longer submitting data

*** data not available at time of report

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

August, 1977

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Pollutant: Misc. Indicators

Units:

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	No. of Data	
142	Minotola Paners - Hwy 90 Hwy 390 Hwy					
	Powell Co.					
	Lahman's					
	Powell Co.					
	N. Ac. Hwy					
	Powell Co.					
	Ramsey West					
	Sil. Bow Co.					
	ESE Stauffer					
	Sil. Bow Co.					
143	NW Site					
	Colstrip					
144	Dellhous Mt. Rx	1.030	1.610	1.710	0.774	8
	Flathead Co.					
	Anaconda South					
	Flathead Co.	27.480	27.480	27.480	6.761	8
	Glac. Park #1					
	Glac. Nat. Park	0.210	0.640	0.640	0.322	8
	Glac. Park #2					
	Glac. Nat. Park #3	0.210	0.580	0.580	0.475	8
	Glac. Nat. Park	0.250	0.560	0.560	0.380	8

Pollutant: Misc. Indicators

Units:

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	No. of Data	
142	Floridito Pista - Hwy 90 Hwy 390 Hwy					
	Burnt Canyan					
	Beaverlodge Co.					
	N. Ac. Hwy					
	Powell Co.					
	WY on Hwy 111					
	Powell Co.					
	Ramsey West					
	Sil. Bow Co.					
	ESE Stauffer					
	Sil. Bow Co.					
143	NW Site					
	Colstrip					
144	Tenkettlet #6					
	Flathead Co.					
	Anaconda South					
	Flathead Co.	37.850	37.850	37.850	9.166	7
	Trailer VAC					
	Flathead Co.	1.460	2.000	2.060	1.301	7
	Glac. Nat. Park #1					
	Glac. Nat. Park #2	0.100	0.610	0.610	0.414	5
	Glac. Park #3					
	Glac. Nat. Park					
	Glac. Park #4					
	Glac. Nat. Park	0.270	0.470	0.470	0.380	8

Pollutant: Misc Indicators

Units

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	No. of Data	
141	West Gallatin - tons/56 mi.					
	Western States					
	Great Falls	20.00	48.15	48.15	23.69	8
	Fire Sta. #1					
	Great Falls	13.78	23.75	25.03	16.71	7
	Fairgrounds					
	Great Falls	11.15	31.46	31.46	14.69	8
	SULFATION RATE - ppm					
	0.03/10 sq cm					
140	SW NE Coop Billings	1.180	4.380	4.800	2.280	7
	East of Laurel					
	Billings	1.110	3.220	3.220	1.720	7
	Hi-Hall Trucking					
	Billings	0.850	1.840	1.840	1.138	7
141	Stock Car Track					
	Great Falls	0.0	0.607	0.607	0.248	7
	Phillips Ref N1					
	Great Falls	0.446	0.629	0.629	0.435	6
	Phillips Ref. E					
	Great Falls	0.309	0.575	0.575	0.355	8
142	Microwave					
	R. Helena	0.300	0.650	0.650	0.375	7
	Hill-Way Jct.					
	Anaconda					
	C-Hill					
143	Anaconda					
	NW Site					
	Colstrip					

Pollutant: Misc. Ruhrlar Data

Units: ppm

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	
140	Sulfur Dioxide					
	Ashwood School					
	Billings					
	5/8 mi NE Coop Billings					
143	Scobey					
	Daniels Co.					
	Ft. Peck					
	McCona Co.					
	Lamont Deer					
	Rosebud Co.					
	NW Site					
	Colstrip					
143	Scobey					
	Daniels Co.					
	Ft. Peck					
	McCona Co.					
	Lamont Deer					
	Rosebud Co.					
	NW Site					
	Colstrip					

*** data not available at time of report

** site no longer submitting data

** - no data available - computer program malfunction

